

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99-NE-53-AD; Amendment 39-12922; AD 2002-21-15]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. TPE331 Series Turboprop and TSE331-3U Series Turboshift Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), that is applicable to Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine Division, Garrett Turbine Engine Company, and AiResearch Manufacturing Company of Arizona) TPE331 series turboprop and TSE331-3U series turboshift engines. This amendment requires replacing second stage turbine stator assemblies, part numbers (P/N's) 894528-1, -2, -3, -5, -6, -10, and -11, with serviceable turbine stator assemblies. This amendment is prompted by reports of six uncontained separations of the second stage turbine wheels associated with obstructed internal cooling holes or passage in the vanes of the second stage turbine stator which may result in contact and rub into the turbine rotor. The actions specified by this AD are intended to prevent uncontained turbine rotor separation and damage to the aircraft.

DATES: Effective November 26, 2002.

ADDRESSES: Information regarding this action may be examined, by appointment, at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Joseph Costa, Aerospace Engineer, Federal Aviation Administration, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Lakewood, CA 90712-4137; Telephone (562) 627-5246, Fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that is applicable to Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine Division, Garrett Turbine Engine Company, and AiResearch Manufacturing Company of Arizona) TPE331 series turboprop and TSE331-3U series

turboshaft engines was published in the Federal Register on February 19, 2002 (67 FR 7318). That action proposed to require replacing second stage turbine stator assemblies, P/N's 894528-1, -2, -3, -5, -6, -10, and -11, with serviceable turbine stator assemblies.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comment received.

One commenter states that the proposal incorrectly identifies some of the areas of fatigue damage as the second and third stage turbine wheels, and instead should have identified the first and second stage turbine wheels. The FAA agrees and has corrected the final rule.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Economic Analysis

There are approximately 4,700 engines of the affected design in the worldwide fleet. The FAA estimates that 2,350 engines installed on aircraft of U.S. registry would be affected by this AD, that it would take approximately 4.0 work hours per engine to do the actions, and that the average labor rate is \$60 per work hour. Required replacement parts will cost approximately \$8,000 per engine. Based on these figures, the total cost of the AD on U.S. operators is estimated to be \$14,958,000.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-21-15 Honeywell International Inc.: Amendment 39-12922. Docket No. 99-NE-53-AD.

Applicability: This airworthiness directive (AD) is applicable to Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine Division, Garrett Turbine Engine Company, and AiResearch Manufacturing Company of Arizona) TPE331-1, -2, -2UA, -3U, -3UW, -5, -5A, -5AB, -5B, -6, and -6A series turboprop and TSE331-3U series turboshaft engines with second stage turbine stator assemblies, part numbers (P/N's) 894528-1, -2, -3, -5, -6, -10, and -11. These engines are installed on, but not limited to Ayres S-2R series; Beech 18 and 45 series and model JRB-6, 3N, 3NM, 3TM, and B100 airplanes; Construcciones Aeronauticas, S.A. (CASA) C-212; De Havilland DH104 series 7AXC (Dove); Dornier 228 series; Fairchild SA226 series (Swearingen Merlin and Metro series); Grumman American G-164 series; Mitsubishi MU-2 and MU-2B series; Pilatus PC-6 series (Fairchild Porter and Peacemaker); Prop-Jets, Inc. Model 400; Rockwell Commander S2-R; Schweizer G-164 series; Shorts Brothers and Harland, Ltd. SC7 (Skyvan); and Twin Commander 680 and 690 series (Jetprop Commander) airplanes; and Sikorsky S-55 series (Helitec Corp. S55T) helicopters.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated, unless already done.

To reduce fatigue damage of the second stage turbine stator inner seal support, rotating knife seal, and the first and second stage turbine wheels which may result in an uncontained rotor failure and damage to the aircraft, do the following:

(a) Replace second stage turbine stator assemblies, P/N's 894528-1, -2, -3, -5, -6, -10, and -11, with a new or reworked second stage turbine stator assembly at the next removal of the second stage turbine stator assembly from the engine or at the next turbine section inspection, but do not exceed 3,100 engine operating hours since last turbine section inspection. Information for replacing second stage turbine stator assemblies is available in Honeywell International Inc. Alert Service Bulletin (ASB) TPE331-A72-2082 dated May 16, 2001. Information for reworking second stage turbine stator assemblies is available in Honeywell International Inc. SB TPE331-72-2085RWK dated May 16, 2001.

(b) After the effective date of this AD, do not install any second stage turbine stator assembly P/N's 894528-1, -2, -3, -5, -6, -10, and -11.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (LAACO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, LAACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the LAACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be done.

Effective Date

(e) This amendment becomes effective on November 26, 2002.

Issued in Burlington, Massachusetts, on October 15, 2002.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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